SIE 377 Software for Engineers Fall 2016

Time/Location: MWF 9:00 AM - 9:50 AM, ILC Rm 119

Instructor: Mike O'Brien

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Office Hours: MWF 12:30 AM – 2:00 PM or by appointment

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Course Catalog Information: Rapid prototyping of decision support systems using Visual Basic for Applications (VBA) and Excel. Use of VBA, Excel, and external packages to solve optimization problems, to perform simulations, and to perform forecasting. Rapid design and implementation of decision support systems for financial, supply chain, and facility location problems.

Course Learning Outcomes: Students should be able to:

- Determine and implement the appropriate modeling approach for problem solution.
- Develop customized solution software.
- Use spreadsheet programs and equation solvers to solve engineering problems.

Course Outline:

- Basics of programming.
- Visual Basic for Applications (VBA) in Excel.
- SQL basics and query development

Prerequisites: ENGR 170 or an equivalent programming course

Text: VBA for Modelers: Developing Decision Support Systems with Microsoft® Office Excel®, S. Christian Albright, 5th edition, South-Western Cengage Learning™

Class Website: Course material, announcements, grades and other pertinent course information will be posted on the course's D2L website (http://www.d2l.arizona.edu). Students should regularly visit the D2L site to stay up-to-date with the course announcements.

Homework: Homework will be assigned on a regular schedule. You are expected to complete and turn in homework by its due date (unless it is the result of an officially excused absence).

Working Together: It is acceptable to work together on homework assignments. However, no copying is allowed. Each student must turn in their own homework assignment in his/her own words. All parties involved in homework copying will receive zero grade on the assignment.

Academic Dishonesty and Plagiarism: All UA students are responsible for upholding the Code of Academic Integrity, available through the office of the Dean of Students and online (http://deanofstudents.arizona.edu/codeofacademicintegrity).

Grading Policy: Semester grades will be based on five components:

Final Grades:

- Homework and Class Participation 25%
- First Midterm 15%
- Second Midterm 15%
- Project 15%
- Comprehensive Final Exam 30%

A 90-100 B 80-89 C 70-79 D 60-69 F 0-59